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10/087,980	03/05/2002	Takeshi Ono	50195-291	6967

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McDERMOTT, WILL & EMERY
600 13th Street, N.W.
Washington, DC 20005-3096

EXAMINER	
STORM, DONALD L	

ART UNIT	PAPER NUMBER
2654	

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/087,980	ONO ET AL.	
	Examiner	Art Unit	
	Donald L. Storm	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *March 5, 2002 through January 21, 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,8 and 10* is/are rejected.

7)☒ Claim(s) *3-7 and 9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/5/02 & 1/21/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. A copy of an Official Communication concerning 2001-077910 (received 1/21/05) is present, and it has been considered by the Examiner.

Specification

2. The title is objected to because it is not sufficiently descriptive of the invention. A new title is required that is clearly indicative of the invention to which the claims are directed. See MPEP § 606.01. The Examiner suggests that the Applicant consider a title including these elements: "Voice Recognition Device with Larger Weights Assigned to Displayed Words of Recognition Vocabulary."

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Appropriate correction is required.

The term "easiness" (line 13) should be defined in the disclosure. The relationship that defines the representation of easiness for display to weights applied to displayed terms should be defined in the disclosure.

To preclude an objection for adding new matter to the specification, the Applicant should point out specific support in the disclosure as filed for any added definition or provide evidence that establishes it as standard terminology. The Applicant is advised that if a definition of the term is presented by amendment, the definition should be from endeavors related to recognition dictionaries.

Please refer to the section *Claim Rejections - 35 USC § 112* for more discussion of the grounds for this objection.

4. The Examiner notes, without objection, the possibility of informalities in the abstract. It is in the best interests of the patent community that the Applicant be aware of these editorial situations and consider changes during normal review and revision of the abstract:

Numbers in the abstract referring to elements in the drawings lengthen the abstract and the reference is unclear when not accompanied by the appropriate figure. They may interfere with its purpose, which is to determine quickly from a cursory inspection the nature and gist of the technical disclosure. The language should be clear and concise. See 37 CFR § 1.72 and MPEP § 608.01(b). The form used in the patent disclosure, such as "unit 5", "unit 1a", and "unit 2" (multiple occurrences) may not be appropriate in the abstract.

Claim Informalities

5. Claims 3-7 and 9 are objected to as being (directly or indirectly) dependent upon a rejected base claim. See MPEP § 608.01(n)V. The claim(s) would be allowable over the prior art of record if rewritten to include all of the limitations of the base claim and any intervening claims. The claims should also be rewritten to overcome any objections or rejections under 35 U.S.C. 112(2), especially as appearing in this Office action. Certain assumptions that make the limitations clear have been considered for the claims, as described next or elsewhere in this Office action.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 1, and by dependency claims 2-9, are indefinite because the scope of a claim cannot be determined when the claimed features making up the claim limitations are not defined with precision and definiteness. The term "easiness" (line 13) should be defined in the disclosure. The relationship that defines the representation of easiness for display to weights applied to displayed terms should be defined in the disclosure.

That subject matter of claim 1 is mentioned without proper teachings on page 2, and easiness of displaying terms is not discussed elsewhere in the specification. Throughout the specification and drawings, the weight values applied to displayed terms are all 1 (unity). The disclosure does not seem to relate this value (unity) either to the easiness with which words of the vocabulary come to be displayed or to the easiness with which the displayed words reside on the display. The Examiner was unable to find any description clearly relating the assigned weights to easiness to be displayed in the specification. The Examiner was also unable to locate a generally accepted representation of "easiness to be displayed" in arts related to the instant disclosure. The rule that an Applicant can act as his own lexicographer to specifically define terms presupposes that the definition is clearly detailed in the disclosure. See 37 CFR 1.71 and MPEP 608.01.

The meaning of every term used in any of the claims should be apparent from the descriptive portion of the specification with clear disclosure as to its import, and where possible, it should be identified in the descriptive portion of the specification by reference to the drawing designating the item or items therein to which the term applies. This is necessary in order to insure certainty in construing the claim terminology. While an Applicant is not limited in the claims to the same terminology used in the specification, the uncertainty as to what representation is intended here by weighted values is great because the specification does not seem to represent easiness by weights. Consequently, an artisan would not be reasonably apprised of the scope of the claim.

If the Applicant is going to maintain the terminology "easiness", the Examiner suggests that the Applicant ensure that the definition and antecedence in the specification clearly establish the meaning of this terminology and its relationship to the weights so that the scope of the claimed invention is not uncertain.

To advance prosecution and evaluate prior art, the Examiner has interpreted "easiness to be displayed" according to the representation by the weighted values of the displayed terms as shown in the embodiment of Fig. 4, which assigns different weight values depending on whether a term is displayed or not displayed.

9. Claim 10 is indefinite in the same way as claim 1 because the limitations are recited using obviously similar phrases.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent . . .
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Honda

11. Claims 1 and 10 are rejected under 35 U.S.C. 102(a) as being anticipated by Honda et al. [Japan Patent Application Publication 2002-041078].

12. Regarding claim 1, Honda [at 0040] describes a voice recognition apparatus with an embodiment in which display or words is related to weights corresponding to recognition words. Honda describes the content and functionality of the recited limitations recognizable as a whole to one versed in the art as the following terminology in the DETAILED DESCRIPTION section:

a voice pickup unit configured to pickup voices [at 0031-32, as a microphone inputting voice];

they are voices of a user [at 0044, as speaker's utterance for recognition];

a memory unit configured to store a plurality of objective recognition terms therein [at 0034-35, as lexical set storing sections storing set B and set A of models used for recognition];

a display unit configured to display a number of objective recognition terms that are included in the plural objective terms stored in the memory unit [at 0039, as a display screen displaying the display content of stored set A or set B];

the number displayed is predetermined [at 0038-39, as the words of each lexical set are stored for display are memorized words of the set];

a calculating unit configured to calculate respective degrees of agreement between the objective recognition terms and the user's voices picked up from the voice pickup unit, wherein the user's voices are recognized on ground of a result of calculation of the degrees of agreement obtained by the calculating unit [at 0033-34, as the recognition section calculates the likelihood of each word in the lexical sets using the features from the sound signal and recognizes the sound signal when the word having the highest likelihood is outputted];

the calculation of agreement occurring after the objective recognition terms being weighted by a weighting unit [at 0034 and 0037, as the weight determined by the weighting-factor decision section is hung on the likelihood of each word and the highest w-P is output];

the weighting unit configured to weight the objective recognition terms with respective weighted values [at 0037, as the weighting factor decision section applies weights w2 and w1 to words of the lexical sets];

each respective weighted value is larger for terms that are displayed than for other objective recognition terms that are not displayed [at 0040-43, as the weight w2 corresponding to the content of a display becomes a value "1" and the weight w1 corresponding to the content of a non-choosing display is begun from value "a" smaller than 1];

the weighted values represent the objective recognition terms easiness to be displayed [at 0037, as the weight w2 corresponds to the content of a display and the weight w1 corresponds to the content of a display which is not shown].

13. Claim 10 sets forth limitations similar to claim 1. Honda describes the limitations as indicated there, where the units provide the means of the device.

Morgan

14. Claims 1, 8, and 10 are rejected under 102(b) as being anticipated Morgan et al. [US Patent 6,192,343].

15. Regarding claim 1, Morgan [at column 3, lines 7-22] describes a voice recognition apparatus with an embodiment in which display of words is related to weights corresponding to recognition words. Morgan describes the content and functionality of the recited limitations recognizable as a whole to one versed in the art as the following terminology:

a voice pickup unit configured to pickup voices of a user [see Fig. 1, item 27, and its descriptions, especially at column 5, lines 32-36, of the microphone receiving user's command or query];

a memory unit configured to store a plurality of objective recognition terms therein [see Fig. 1, items 14, 40, and their descriptions, especially at column 5, lines 37-38, of the stored set of actual commands];

a display unit configured to display a number of objective recognition terms which are included in the plural objective terms stored in the memory unit [see Fig. 1, items 36, 38, and their descriptions, especially at column 5, lines 38-51, of actual commands and relevant commands presented on a display];

the number displayed is predetermined [at column 11, lines 20-24 and 44-45, as displaying all actual commands and relevant commands is set up *{Exmr: "all" as used here is inherently a number, for example as in Figs. 4, 5, 6, being 2-when-there-are-two and 6-when-there-are-six}*];

a weighting unit configured to weight the objective recognition terms with respective weighted values and a calculating unit configured to calculate respective degrees of agreement between the objective recognition terms and the user's voices picked up from the voice pickup unit, wherein the user's voices are recognized on ground of a result of calculation of the degrees of agreement obtained by the calculating unit [see Fig. 2, items 50, 51, 52, 53, 54, 55, 56, and their descriptions, especially at column 7, lines 5-13, of recognition the speech term with a weight, twice the weight, and doubling the weight];

the calculation of agreement occurring after the objective recognition terms being weighted by a weighting unit [at column 8, lines 13-15, as compare each subphrase in the query to subphrases in the command string in an additional pass after weighting];

each respective weighted value is larger for terms that are displayed than for other objective recognition terms that are not displayed [at column 9, lines 2-6, as double the weight of a command that may not be displayed and it will be displayed];

the weighted values represent the objective recognition terms easiness to be displayed [at column 12, lines 47-54, as possible commands are conveniently weighted for display with relevant commands].

16. Regarding claim 8, Morgan also describes:

to extract another number of objective recognition terms from the terms whose degrees of agreement have been calculated in order of height and display them [see Fig. 6, items 72, 75, and

their descriptions, especially at column 7, lines 26-32, of displaying other relevant commands based upon their respective weights sorted by weight];

the height is a degree of agreement [see Fig. 2, items 50, 51, 52, 53, 54, 55, 56, and their descriptions, especially at column 7, lines 5-13, of recognition the speech term with a weight, twice the weight, and doubling the weight];

this other number of terms extracted is also predetermined [at column 11, lines 20-24 and 44-45, as displaying all actual commands and relevant commands is set up *{Exmr: "all" as used here is inherently a number, for example as in Figs. 4, 5, 6, being 2-when-there-are-two, 6-when-there-are-six}*];

the display thereby allows the final objective recognition term desired by the user to be selected [at column 3, lines 15-19, as the display prompts the user to select a command for carrying out the action].

17. Claim 10 sets forth limitations similar to claim 1. Morgan describes the limitations as indicated there, where the units provide the means of the device.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to

the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Morgan

19. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan et al. [US Patent 6,192,343].

20. Claim 2 includes the limitations of claim 1. Morgan describes those limitations as indicated there.

Although Morgan does not explicitly describe the order in memory of the recognition terms, the terms' being stored in memory necessarily prescribes the order in which the memory stores them.

Morgan [see Figs. 4, 5, 6] describes the order of display of recognition terms. Morgan does not describe the order in memory of the recognition terms. In particular, Morgan does not describe that the display of the recognition terms is in the same order the memory stores the terms.

However, Morgan [at columns 8-10] describes extensive processing to achieve the order for display that is different from the order of storage. In view of the magnitude of that processing, it would have been obvious to one of ordinary skill in the art of displaying stored data at the time that the invention was made that the processing for sorting can be eliminated if the effect of the processing is unneeded or undesired. Morgan [at column 2, line 28-column 3, line 1] points out that the user is able to locate desired commands from a display without sorting. Accordingly, it would have been obvious to an artisan at the time of invention to display Morgan's recognition

terms in the prescribed order, the same as the order of storing, and so achieve the advantage of simplifying the processing.

Conclusion

21. The following references here made of record are considered pertinent to applicant's disclosure:

Sanada et al. [US Patent 5,329,609] describes ease of creating and using alphabetical storage and display related to weights corresponding to recognition of words.

Rozak [US Patent 5,950,160] describes how to alter a display of recognition words when the number to be displayed and the number that the display can hold are different.

Kimura et al. [US Patent 6,374,218] describes displaying a portion of the lexicon for speech recognition and only comparing those displayed words for recognition.

22. Any response to this action should be mailed to:

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P.O. Box 1450
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or faxed to:

(703) 872-9306, (for formal communications intended for entry)

Or:

(703) 872-9306, (for informal or draft communications, and please label "PROPOSED" or "DRAFT")

Patent Correspondence delivered by hand or delivery services, other than the USPS, should be addressed as follows and brought to U.S. Patent and Trademark Office, Customer Service Window, **Mail Stop Amendment**, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Storm, of Art Unit 2654, whose telephone number is (703) 305-3941. The examiner can normally be reached on weekdays between 8:00 AM and 4:30 PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: ebc@uspto.gov. For general information about the PAIR system, see http://pair-direct.uspto.gov.

Donald L. Storm
Patent Examiner
Art Unit 2654

March 4, 2005